

WHAT IS CLAIMED IS:

1                   1.       A system for synchronizing isochronous data packets for delivery to a  
2 device, comprising:

3                   an isochronous data processor configured to process said isochronous data  
4 packets, said isochronous data processor inserts a data marker at beginning of each of said  
5 isochronous data packets;

6                   a firmware control configured to control operation of said isochronous data  
7 processor; and

8                   a storage medium for storing said data markers and their associated  
9 isochronous data packets.

1                   2.       The system according to claim 1, wherein upon retrieving data from  
2 said storage medium, said isochronous data processor uses said data marker to synchronize  
3 data delivery to said device.

1                   3.       The system according to claim 2, wherein said data delivery is  
2 synchronized in that said data delivery begins with an isochronous data packet which  
3 corresponds to a frame boundary.

1                   4.       The system according to claim 1, wherein said isochronous data  
2 processor uses said data marker to re-synchronize data delivery to said device when said data  
3 delivery contains a corrupted packet.

1                   5.       The system according to claim 4, wherein said data delivery is re-  
2 synchronized in that said data delivery begins with an isochronous data packet which  
3 corresponds to a next frame boundary.

1                   6.       The system according to claim 1, wherein said isochronous data  
2 packets are transmitted in accordance with IEEE 1394 specification.

1                   7.       A system for synchronizing isochronous data delivery, comprising:  
2 a data interface for receiving and transmitting isochronous data packets;  
3 an isochronous data processor for processing said isochronous data packets;  
4 a firmware control configured to control operation of said isochronous data  
5 processor; and  
6 a storage medium for storing said processed isochronous data packets;

7 wherein said data interface receives said isochronous data packets from a  
8 device;  
9 wherein said isochronous data processor processes said received isochronous  
10 data packets by inserting a data marker in front of each of said received isochronous data  
11 packets;  
12 wherein said data marker and said each of said received isochronous data  
13 packets are stored onto said storage medium; and  
14 wherein when data are retrieved from said storage medium for delivery, said  
15 isochronous data processor uses said data marker to identify an isochronous data packet  
16 which corresponds to start of a frame.

1 8. The system according to claim 7, wherein said isochronous data are  
2 transmitted in accordance with IEEE 1394 specification.

1 9. A method for synchronizing isochronous data delivery, comprising:  
2 receiving a plurality of isochronous data packets;  
3 inserting a data marker at beginning of each of said plurality of isochronous  
4 data packets;  
5 storing said data marker and its associated isochronous data packet onto a  
6 storage medium; and  
7 upon retrieving data from said storage medium, using said data marker to  
8 synchronize said isochronous data delivery.

1 10. A method for synchronizing isochronous data delivery, comprising:  
2 setting a synchronization indicator to a first state;  
3 examining an isochronous data packet to determine whether it contains a data  
4 marker;  
5 if said isochronous data packet does not contain said data marker, discarding  
6 said isochronous data packet and repeating said examining with another isochronous data  
7 packet if necessary;  
8 if said isochronous data packet contains said data marker, checking whether  
9 said synchronization indicator is set to a second state;  
10 if said synchronization indicator is set to said second state, outputting said  
11 isochronous data packet to a requesting device;

12                   if said synchronization indicator is not set to second state, checking whether  
13   said isochronous data packet corresponds to start of a frame;  
14                   if said isochronous data packet corresponds to start of said frame, setting said  
15   synchronization indicator to said second state and outputting said isochronous data packet to  
16   said requesting device; and  
17                   repeating said examining with another isochronous data packet if necessary.

Approved for Release